

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A multi-functional actuator comprising:
 - a housing having an internal space and a groove in the inner side;
 - a sound-generating diaphragm with an outer end fixed to the upper end of said housing;
 - a voice coil fixed to the bottom of said diaphragm;
 - a vertically magnetized magnet;
 - an upper plate attached to said magnet for forming a magnet circuit;
 - a yoke for forming the magnetic circuit together with said magnet;
 - a weight for defining a vibration body together with said yoke;
 - a leaf spring fixed into said grooves of the housing and having a portion of curvature which is a bending portion radially bent in an outer circumferential portion of said leaf spring; and
 - a vibrating coil installed in said housing for generating vibration using a magnetic flux formed in a magnetic system.
2. (Previously Presented) The multi-functional actuator according to claim 1, wherein said leaf spring is provided in a pair, and at least one of said springs has the portion of curvature.
3. (Previously Presented) The multi-functional actuator according to claim 1, wherein said leaf spring is provided as one.
4. (Previously Presented) The multi-functional actuator according to claim 1, wherein said portion of curvature of the leaf spring is in elastic portions.
5. (Previously Presented) The multi-functional actuator according to claim 1, wherein said portion of curvature of the leaf spring is in the circumferential direction.

6. (Previously Presented) The multi-functional actuator according to claim 1,
wherein said portion of curvature of the leaf spring is provided in plural
number.
7. (Canceled)
8. (Previously Presented) The multi-functional actuator according to claim 1,
wherein said portion of curvature of the leaf spring is a twisting portion.
9. (Canceled)
10. (Canceled)
11. (Currently Amended) The multi-functional actuator according to claim 1 7,
wherein said ~~bending portion of the~~ leaf spring is ~~radially bent in an outer~~
~~circumferential portion of said leaf spring, and~~ smoothly shaped at the
bending portion and the adjacent right and left ends.
12. (Currently Amended) The multi-functional actuator according to claim 1 7,
wherein said ~~bending portion of the~~ leaf spring is ~~radially bent in an outer~~
~~circumferential portion of said leaf spring, and~~ linearly shaped at the bending
portion and the adjacent right and left ends.
13. (Currently Amended) A multi-functional actuator comprising:
a housing having an internal space in the inner side;
a coil installed in said housing;
a magnet;
a yoke for forming the magnetic circuit together with said magnet; and
at least one leaf spring fixed in the housing and having a portion of curvature;
said portion of curvature of the leaf spring being a bending portion
radially bent in an outer circumferential portion of said leaf spring.

14. (Previously Presented) The multi-functional actuator according to claim 13, wherein said portion of curvature of the leaf spring is in elastic portions.
15. (Previously Presented) The multi-functional actuator according to claim 13, wherein said portion of curvature of the leaf spring is in the circumferential direction.
16. (Canceled)
17. (Previously Presented) The multi-functional actuator according to claim 13, wherein said portion of curvature of the leaf spring is a twisting portion.
18. (Canceled)
19. (Canceled)
20. (Currently Amended) The multi-functional actuator according to claim 13 ~~16~~, wherein said ~~bending portion of the~~ leaf spring is ~~radially bent in an outer circumferential portion of said leaf spring,~~ and smoothly shaped at the bending portion and the adjacent right and left ends.
21. (Currently Amended) The multi-functional actuator according to claim 13 ~~16~~, wherein said ~~bending portion of the~~ leaf spring is ~~radially bent in an outer circumferential portion of said leaf spring,~~ and linearly shaped at the bending portion and the adjacent right and left ends.
22. (Currently Amended) A multi-functional actuator comprising:
- a housing having an internal space in the inner side;
 - a sound-generating diaphragm with an outer end fixed to the upper end of said housing;
 - a coil fixed to the bottom of said diaphragm;
 - a magnet;
 - a yoke for forming the magnetic circuit together with said magnet; and

at least one leaf spring fixed in the housing and having a portion of curvature being a bending portion which is radially bent in an outer circumferential portion of said leaf spring.

23. (Previously Presented) The multi-functional actuator according to claim 22, wherein said portion of curvature of the leaf spring is in elastic portions.

24. (Previously Presented) The multi-functional actuator according to claim 22, wherein said portion of curvature of the leaf spring is in the circumferential direction.

25. (Canceled)

26. (Previously Presented) The multi-functional actuator according to claim 22, wherein said portion of curvature of the leaf spring is a twisting portion.

27. (Canceled)

28. (Canceled)

29. (Currently Amended) The multi-functional actuator according to claim 22 ~~25~~, wherein said ~~bending portion of the~~ leaf spring is ~~radially bent in an outer circumferential portion of said leaf spring, and~~ smoothly shaped at the bending portion and the adjacent right and left ends.

30. (Currently Amended) The multi-functional actuator according to claim 22 ~~25~~, wherein said ~~bending portion of the~~ leaf spring is ~~radially bent in an outer circumferential portion of said leaf spring, and~~ linearly shaped at the bending portion and the adjacent right and left ends.